REMARKS

Entry of the amendment and reconsideration is respectfully requested. The amendment responds to points raised in the outstanding Official Action.

Claims 1-4 and 6-9 are before the Examiner. Claim 1 has been amended to include the suggested language. In addition, claims 2, 3 and 6-8 have been amended to improve their readability and form. Claims 10 and 11 have been added to further distinguish over the applied art by specifying the preparation of the complex by mixing, lyophilization or dialysis. Claim 11 specifies dialysis. The three techniques are discussed in the specification, e.g. the section starting on page 14. The results achieved by the techniques vary. See, for example pages 23 and 28. Accordingly, no new matter is believed to have been introduced by these amendments.

Withdrawal of the rejection of claims 1-4 and 6-9 under the first paragraph of 35 USC 112 is note with appreciation.

A Rule 63 declaration has been sent to the inventor for signature. Upon its receipt, the signed copy will be forwarded to the Examiner.

The undersigned has requested and is awaiting a copy of the original Filing receipt. Upon receipt a request for a corrected filing receipt will be made.

Rejections under 35 USC 112

Claims 1-4 and 6-9 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicants respectfully traverse.

The point raised in the Official Action has been addressed by making the changes equivalent to those suggested by the Examiner. The rejection is thought to have been rendered moot thereby.

Rejection under 35 USC 103

Claims 1-4 and 6-9 are rejected under 35 USC 103 as being unpatentable over Lowell et al. (v) or Smith et al. (W) or Averaham et al. (X) in view of Ratner et al. Applicants respectfully traverse.

The Examiners position, as set forth in the Official Action, is that the general teaching provided in the primary references are applicable to any and all proteins or peptides and that it would be reasonable to suppose that "improved" immunogenicity or immunogenicity is achieved if the protein or peptide is treated by the taught methods.

The Smith et al. and Aversham et al. documents are silent as to the details of the technique(s) employed. Lowell et al. is also limited teaching in this regard. The instant specification clearly evidences variations in the degree of immunogenicity achieved by the different techniques and also with the variety of the peptide or protein treated. Note Table 4 and the statement starting on line 19 of page 23. There is unpredictability.

It should be further noted gp160 is a transmembrane protein. It is much larger than the exemplified recombinant R32ft (a hydrophobic decapeptide). The specification treats them as distinct chemical entities. Gp160 forms trimers which results in "molecular complexes" having significantly larger molecular weights than the decapeptide. Even with this size, the immunogenicity of the trimeric complex is enhanced with proteosomes and still more enhanced by the presence of adjuvants, such as alum, and also by the presence of microemulsions. This

behavior is distinct from gp41 and Alex 10. See table 6 on page 40 of the instant specification. The Gp41 titers show a decrease from 680 to 565, when complexed with proteosomes, while gp160 titers increase from 30,274 to 51,112. Alex 10 titers decrease from 693 to 200 when microemulsions are substituted for alum, while gp160 increase from 51,112 to 104,644, with the same substitution. Clearly there is titer variation amongst the proteins and peptides , even those from the same source, not suggested by the art.

One could state that the differences associated with the gp160 titers are unexpected. With regard to the achieved results, the claims are not similarly situated. Clearly claim 1, as amended, is directed to an immunogenic composition having the complex with the requisite ratio range of gp160 to proteosome. The complex is further characterized in terms of the effect of the adjuvant in terms of enhanced titer formation. Dependent claim 6 and 7 specify the ratio range with increasing degrees of specificity. Dependent claims 3 and 4 require the presence of adjuvant(s) in the composition. Claim 4 identifies the adjuvant as alum. The new claims specify the method of complex preparation. New claim 11 specifies this method as the exemplified dialysis method.

Even accepting the Examiners premise as generally true, significant titer variation is shown between peptides and protein complexes and also in their manner of preparation. This variation is not expected from the applied art. Further, the degree of titer improvement for the disclosed gp160complex is not suggested and therefore is unexpected. These results mitigate against the sufficiency of the prima facie case.

For these reasons, withdrawal of the rejection is respectfully requested.

Conclusion

Having addressed all of the rejections and objections, allowance of the application is believed to be in order. A notice to this effect is respectfully requested.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 210-380 referencing docket no. 38644-170539 (*formerly 37833-20001.10*). However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: September 27, 2001 BY

Thomas G. Wiseman
Registration No. 35,046
Venable, Baetjer, Howard & Civiletti, LLP
1201 New York Avenue, N.W.
Washington, D.C. 20005-3917
Telephone: (202) 513-4614
Facsimile: (202) 962-8300

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) [A] An immunogenic composition comprising an antibody inducing effective amount of a construct comprising a proteosome-gp 160 complex, wherein 1) the complex induces the formation of an antibody that binds gp 160 which antibody formation is further enhanced by at least 1.5 fold with an adjuvant, and 2) the proteosome and the gp 160 are present in a ratio which [may] ranges from 1:1 [and] to 1:20.

2. (Amended) A composition [comprising the construct of] according to claim 1 [in] further comprising a pharmaceutically acceptable carrier.

3. (Amended) The composition of claim 2 [containing] further comprising an adjuvant.

6. (Amended) The composition [construct] according to claim 1 wherein the ratio is between 1:1 and 1:3.

7. (Amended) The composition [construct] according to claim [1] 6 wherein the ratio range is 1:1.

8. (Amended) A method for inducing antibody formation in a host comprising administering an effective amount of the [construct of claim 1 or the] composition of claim [2] 1 to host to induce the formation of an antibody that binds gp160.

9. (New) The composition of claim 1 wherein the complex is formed by mixing gp160 and proteosomes, combining gp160 and proteosomes and then lyophilizing or dialyzing.

10. (New) The composition of claim 1 wherein the complex is formed by gp160 and proteosomes and then dialyzing.